

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Kevin K. Funk

Confirmation No.:

Application No.: 09/643,389

Examiner: M. Von Buhr

Filing Date: Aug. 22, 2000

Group Art Unit: 2125

Title: APPARATUS AND METHOD FOR MANUFACTURING INTEGRATED CIRCUIT DEVICES

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in triplicate is the Appeal Brief in this application with respect to the Notice of Appeal filed on May 13, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$110.00
() two months	\$420.00
() three months	\$950.00
() four months	\$1480.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.
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Typed Name: Angela Troussel

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Respectfully submitted,

Kevin K. Funk

By

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT
APPEALS AND INTERFERENCES

In Re Application of:)	
)	
KEVIN K. FUNK)	
)	Group Art Unit 2125
Serial No. 09/643,389)	
)	Examiner M. Von Buhr
Filed August 22, 2000)	
)	Atty Dkt 10970997-3
For: APPARATUS AND)	
METHOD FOR)	
MANUFACTURING)	
INTEGRATED CIRCUIT)	
DEVICES)	

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Appeal Brief is submitted in response to the final rejection of the claims mailed February 17, 2004. A Notice of Appeal was filed on May 13, 2004.

(1) REAL PARTY IN INTEREST

The real party in interest in the above-referenced patent application is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

(2) RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences currently known to appellant, appellant's legal representatives or the assignee, which will directly affect, or be directly affected by, or have a bearing on, the Board's decision.

(3) STATUS OF CLAIMS

Claims 1-18 were originally filed with the application; of these, claims 1-12 were canceled by preliminary amendment. Claim 16 was subsequently canceled. Accordingly, claims 13-15, 17 and 18 remain pending in the application at the time of appeal,

all of which stand rejected. The rejection of claims 13-15, 17 and 18 is appealed.

(4) STATUS OF AMENDMENTS

No amendments were filed or entered subsequent to the final rejection mailed February 17, 2004.

(5) SUMMARY OF THE INVENTION

In general terms, a control system for a manufacturing process, e.g., a photolithographic integrated circuit manufacturing process, is disclosed. The control system incorporates a visual gating device in which a series of nests are provided. In operation, a human user may remove a plurality of integrated circuit wafers from a "lot box" and introduce the wafers into a first stage of the manufacturing process. The empty lot box is placed in the first nest of the visual gating device. A barcode reader located within the first nest may be used to scan a barcode label on the lot box to determine the lot number corresponding to the lot box. This lot number is then used by the control system to obtain setup parameters for the various photolithographic manufacturing process operations. The human operator advances wafer lot

boxes through the nest positions in accordance with a series of displays which are controlled by the control system.

Appellant's invention as claimed is summarized and explained below with reference numerals, specification page numbers and drawing figure numbers indicating where the claim finds support in the specification and drawings.

13. A manufacturing system (10) for manufacturing integrated circuit devices comprising:

- at least a first manufacturing machine (20, 100) [Fig. 1; page 8, lines 14-33];

- a human interface device (200) including:

- at least a first station (210) associated therewith [Fig. 3; page 16, lines 8-16];

- at least a first display device (214) located adjacent said first station (210) [Figs. 3-4; page 16, lines 17-20]; and

- at least a first scanning device (220) located adjacent said first station (210) [Figs. 3-4; page 16, lines 20-23];

- a first controller (360) operatively connected to both said first display device (214) and said first scanning device (220) [Fig. 5; page 17, lines 19-22];

- a second controller (170, 370) operatively connected to said at least a first manufacturing machine (20, 100) [Fig. 5; page 8, lines 7-9; page 19, lines 23-28];

a data link (176, 372) connecting said first controller (360) and said second controller (170, 370) [Fig. 5; page 19, lines 23-25; page 20, lines 37-38];

at least a second station (240) associated with said human interface device (200) [Figs. 3-4; page 16, lines 9-11];

at least a second display device (244) located adjacent said at least a second station (240) [Figs. 3-4; page 16, lines 17-20];

at least a second scanning device (250) located adjacent said second station (240) [Figs. 3-4; page 16, lines 30-33];

wherein said first controller (360) is operatively attached to both said second display device (244) and said second scanning device (250) [Fig. 5; page 17, lines 19-22; page 19, lines 4-7]; and

wherein said first display device (214) indicates to a human user when to move an object (266) from said first station (210) to said second station (240) [Fig. 8; page 20, lines 20-25; page 29, lines 21-23].

14. The manufacturing system (10) of claim 13 wherein said system comprises a photolithographic integrated circuit manufacturing system [Fig. 1; page 8, lines 14-15].

15. The manufacturing system (10) of claim 13 wherein said at least a first manufacturing machine (20, 100) comprises a wafer stepper machine (100) [Fig. 1; page 8, lines 30-33].

17. The manufacturing system (10) of claim 13 and further comprising:

at least a second manufacturing machine (20, 100) [Fig. 1; page 8, lines 14-33];

a third controller (170, 370) operatively connected to said at least a second manufacturing machine (20, 100) [Fig. 5; page 8, lines 7-9; page 19, lines 23-28]; and

a data link (176, 372) connecting said first controller (170, 370) and said third controller (170, 370) [Fig. 5; page 19, lines 23-25; page 20, lines 37-38].

18. The manufacturing system of claim 17 wherein said second manufacturing machine (20, 100) is a resist spin track machine (20) [Fig. 1; page 8, lines 15-18].

(6) ISSUES

- A. Whether claims 13-15, 17 and 18 are unpatentable under 35 U.S.C. §102(b) as being clearly anticipated by Barnett U.S. Patent No. 5,432,702.
- B. Whether claims 13-15, 17 and 18 are unpatentable under 35 U.S.C. §103(a) as being obvious in view of Saka et al. U.S. Patent No. 5,434,790.

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(7) GROUPING OF CLAIMS

None of the claims stand or fall together.

(8) ARGUMENT

Relevant Law

Anticipation under 35 U.S.C. §102

The standard for lack of novelty, that is, for "anticipation," under 35 U.S.C. 102 is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986).

Legal Basis for Obviousness Under 35 U.S.C. §103

The test for obviousness under 35 U.S.C. 103 is whether the claimed invention would have been obvious to those skilled in the art in light of the knowledge made available by the reference or references. *In re Donovan*, 184 USPQ 414, 420, n. 3 (CCPA 1975). It requires consideration of the entirety of the disclosures of the references. *In re Rinehart*, 189 USPQ 143, 146 (CCPA 1976). All limitations of the Claims must be considered. *In re Boe*, 184 USPQ 38, 40 (CCPA 1974). In making a determination as to obviousness, the references must be read without benefit of applicants' teachings. *In re Meng*, 181 USPQ 94, 97 (CCPA

1974). In addition, the propriety of a Section 103 rejection is to be determined by whether the reference teachings appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination, or other modifications. *In re Lintner*, 173 USPQ 560, 562 (CCPA 1972).

In the case of *In re Wright*, 6 USPQ 2d 1959 (CAFC 1988), the CAFC decided that the Patent Office had improperly combined references which did not suggest the properties and results of the applicants' invention nor suggest the claimed combination as a solution to the problem which applicants' invention solved.

The CCPA reached this conclusion after an analysis of the prior case law, at p. 1961:

We repeat the mandate of 35 U.S.C. 103: it is the invention as a whole that must be considered in obviousness determinations. The invention as a whole embraces the structure, its properties, and the problem it solves. See, e.g., *Cable Electric Products, Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1025, 226 USPQ 881, 886 (Fed. Cir. 1985) ("In evaluating obviousness, the hypothetical person of ordinary skill in the pertinent art is presumed to have the 'ability to select and utilize knowledge from other arts reasonably pertinent to [the] particular problem' to which the invention is directed"), quoting *In re Antle*, 444 F.2d 1168, 1171-72, 170 USPQ 285, 287-88 (CCPA 1971); *In re Antonie*, 559 F.2d 618, 619, 195 USPQ 6, 8 (CCPA 1977) ("In delineating the invention as a whole, we look not only in the claim in question... but also to those properties of the subject matter which are inherent in the subject

matter and are disclosed in the specification") (emphasis in original).

The determination of whether a novel structure is or is not "obvious" requires cognizance of the properties of that structure and the problem which it solves, viewed in light of the teachings of the prior art. See, e.g., *In re Rinehart*, 531 F.2d 1048, 1054, 189 USPQ 143, 149 (CCPA 1976) (the particular problem facing the inventor must be considered in determining obviousness); see also *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed. Cir. 1984) (it is error to focus "solely on the product created, rather than on the obviousness or notoriousness of its creation") (quoting *General Motors Corp. v. U.S. Int'l Trade Comm'n*, 687 F.2d 476, 483, 215 USPQ 484, 489 (CCPA 1982), cert. denied, 459 U.S. 1105 (1983)).

Thus the question is whether what the inventor did would have been obvious to one of ordinary skill in the art attempting to solve the problem upon which the inventor was working. *Rinehart*, 531 F.2d at 1054, 189 USPQ at 149; see also *In re Benno*, 768 F.2d 1340, 1345, 226 USPQ 683, 687 (Fed. Cir. 1985) ("appellant's problem" and the prior art present different problems requiring different solutions").

A basic mandate inherent in Section 103 is that a piecemeal reconstruction of prior art patents shall not be the basis for a holding of obviousness. It is impermissible within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. *In re Kamm*, 172

USPQ 298, 301-302 (CCPA 1972). Phrased somewhat differently, the fact that inventions of the references and of applicants may be directed to concepts for solving the same problem does not serve as a basis for arbitrarily choosing elements from references to attempt to fashion applicants' claimed invention. *In re Donovan*, 184 USPQ 414, 420 (CCPA 1975).

It is also clearly established in the case law that a change in the mode of operation of a device which renders that device inoperative for its stated utility as set forth in the cited reference renders the reference improper for use to support an obviousness-type rejection predicated on such a change. See, e.g., *Diamond International Corp. v. Walterhoefer*, 289 F.Supp. 550, 159 USPQ 452, 460-61 (D.Md. 1968); *Ex parte Weber*, 154 USPQ 491, 492 (Bd.App. 1967). In addition, any attempt to combine the teaching of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. See, e.g., *Ex parte Hartmann*, 186 USPQ 366 (Bd.App. 1974); and *Ex parte Sternau*, 155 USPQ 733 (Bd.App. 1967).

A reference which teaches away from the applicants' invention may not properly be used in framing a 35 U.S.C. 103 rejection of applicants' claims. See *United States v. Adams*, 148 USPQ 429 (Sup. Ct. 1966).

Argument re Issue A

Claims 13-15, 17 and 18 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by Barnett U.S. Patent No. 5,432,702.

It is submitted that claims 13-15, 17 and 18 are not anticipated by Barnett and, further, that the invention recited in these claims is not disclosed or suggested by any of the prior art of record, considered either alone or in proper combination.

Claim 13 recites the following:

A manufacturing system for manufacturing integrated circuit devices comprising:

at least a first manufacturing machine;

a human interface device including:

at least a first station associated therewith;

at least a first display device located adjacent

said first station; and

at least a first scanning device located adjacent

said first station;

a first controller operatively connected to both said first display device and said first scanning device;

a second controller operatively connected to said at least a first manufacturing machine;

a data link connecting said first controller and said second controller;

at least a second station associated with said human interface device;

at least a second display device located adjacent said at least a second station;

at least a second scanning device located adjacent said second station;

wherein said first controller is operatively attached to both said second display device and said second scanning device; and

wherein said first display device indicates to a human user when to move an object from said first station to said second station.

In the final rejection, the Examiner asserts that all of the limitations of appellant's claim 13 are disclosed at least in Figs. 1 and 2 of Barnett. Appellant respectfully disagrees with the position for the following reasons.

Fig. 1 of Barnett illustrates a processing system having a workstation (i.e., workstation controller 30, barcode reader 40, tool

10 and monitor 60) connected to a host computer 20. In Fig. 2, three such workstations are shown as follows:

1. a first workstation consisting of workstation controller 30, barcode reader 40, tool 10 and monitor 60;
2. a second workstation consisting of workstation controller 32, barcode reader 42, tool 12 and monitor 62; and
3. a third workstation consisting of workstation controller 34, barcode reader 44, tool 14 and monitor 64.

The controller (30, 32, 34) of each workstation is connected to a single host computer 20. In this manner, each of the three workstations can communicate with and be controlled by the host computer 20.

With reference to the first workstation, the workstation controller 30 is connected to barcode reader 40 and to tool 10. The tool 10, in turn, is connected to the monitor 60. The second and third workstations are configured in an identical manner.

The Examiner, in the final rejection, takes the position that appellant's recited first and second display devices are met by the Barnett monitors 60, 62, 64 and that appellant's recited first and second scanners are met by the Barnett barcode readers 40, 42, 44. As discussed below, however, Barnett does not disclose all of appellant's claim 13 limitations.

Claim 13 recites the following:

a first controller operatively connected to both said first display device and said first scanning device;

...

wherein said first controller is operatively attached to both said second display device and said second scanning device;

Accordingly, appellant's claim 13 requires a first and a second display device and a first and a second scanning device, *all of which* are attached to the *same controller*. In Barnett, however, each of the three controllers 30, 32, 34 has only one sensor (barcode readers 40, 42, 44) attached thereto. Also, the Barnett display devices (monitors 60, 62, 64) are not attached to the controllers 30, 32, 34 but rather to the tools 10, 12, 14. Further, each of the Barnett controllers 30, 32, 34 has only one of the monitors 60, 62, 64 associated therewith.

Claim 13 further recites the following:

**a second controller operatively connected to said
at least a first manufacturing machine;
a data link connecting said first controller and said
second controller;**

Thus, in addition to the first controller, as discussed above, claim 13 further requires a second controller connected to a manufacturing machine and a data link connecting the first and second controllers. In Barnett, however, the barcode reader 40 and tool 10 are connected to a single controller and not two separate controllers as in claim 13.

Since all of the elements of appellant's claim 13 are not met by Barnett, claim 13 is not anticipated by Barnett. As discussed previously, the standard for lack of novelty, that is, for "anticipation," under 35 U.S.C. 102 is one of strict identity. To anticipate a claim for a patent, a single prior source must contain all its essential elements. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 231 USPQ 81, 90 (Fed. Cir. 1986).

Claims 14, 15, 17 and 18 are allowable at least at depending from allowable base claim 13. Claim 17 is allowable on further independent grounds in that neither Barnett nor any of the other references of record, considered either alone or in proper combination, disclose or suggest the manufacturing system of claim 13 and further comprising:

at least a second manufacturing machine;
a third controller operatively connected to said at least a second manufacturing machine; and
a data link connecting said first controller and said third controller.

Summarizing the discussion above, base claim 13 requires:

- a first controller connected to at least two display devices and at least two scanning devices;
- a second controller connected to at least a first manufacturing machine; and
- a data link connecting the first and second controllers.

Dependent claim 17 additionally recites a third controller connected to at least a second manufacturing machine and a data link connecting the first and third controllers. This arrangement is clearly not disclosed by Barnett.

Argument re Issue B

Claims 13-15, 17 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Saka et al. U.S. Patent No. 5,434,790.

It is submitted that claims 13-15, 17 and 18 are not unpatentable over Saka et al. and, further, that the invention recited in these claims is not disclosed or suggested by any of the prior art of record, considered either alone or in proper combination.

Appellant's claim 13 recites the following:

A manufacturing system for manufacturing integrated circuit devices comprising:

at least a first manufacturing machine;

a human interface device including:

at least a first station associated therewith;

at least a first display device located adjacent

said first station; and

at least a first scanning device located adjacent said first station;

a first controller operatively connected to both said first display device and said first scanning device;

a second controller operatively connected to said at least a first manufacturing machine;

a data link connecting said first controller and said second controller;

at least a second station associated with said human interface device;

at least a second display device located adjacent said at least a second station;

at least a second scanning device located adjacent said second station;

wherein said first controller is operatively attached to both said second display device and said second scanning device; and

wherein said first display device indicates to a human user when to move an object from said first station to said second station.

The Examiner states the following on page 4 of the final rejection:

However, Saka et al. Do not specify that the production system is necessarily one for manufacturing integrated circuit devices, including using wafer stepper and resist spin track machines, as instantly claimed. In this regard, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Saka et al. in the integrated circuit manufacturing environment, because Saka et al. teach a resultant benefit of versatility in manufacturing of the produce, and since it has

been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

The Examiner, thus, admits that Saka et al. fails to disclose all of the limitations of appellant's claim 13 but takes the position, nevertheless, that these limitations would be obvious. It is, thus, apparent, that neither Saka et al. nor any of the other references of record provide any teaching, whatsoever, of appellant's integrated circuit device manufacturing system as recited in claim 13. Appellant's use of a such a system is not a matter within the knowledge of a person of ordinary skill in the art and the Examiner has submitted no evidence to the contrary. Accordingly, there is absolutely nothing in the file history of this prosecution to support the Examiner's statement. There must be something in the teachings of cited references to suggest to an individual skilled in the art that a claimed invention would be obvious. *W. L. Gore and Associates v. Garlock, Inc.*, 220 USPQ 303, 311 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). "There must be a reason or suggestion in the art for selecting the procedure used, other than the knowledge learned from the applicant's disclosure." *In re Dow Chemical Co.*, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988).

The Examiner relies upon *In re Leshin* 227 F.2d 197, 125 USPQ 416 (CCPA 1960) to support the current rejection.

Specifically, the Examiner asserts that the current rejection is proper “since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice”.

At the outset, it is not clear how selecting “a known material on the basis of its suitability for the intended use” relates to the present issue. In any event, appellant respectfully asserts, for the reasons advanced below, that *In re Leshin* does not support the Examiner’s position. *In re Leshin* is discussed, for example, in MPEP 2144.07 as follows:

See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious)

The present issue relative to appellant’s claim 13 is whether or not it would be obvious, in view of Saka et al., to provide an integrated circuit manufacturing system as recited in appellant’s claim considering that, as admitted by the Examiner, Saka et al. does not disclose an integrated circuit manufacturing system. The *In re Leshin* case, however, appears to deal with the issue of substituting a specific material when it was well known to use the general type of material in the same application. Thus it would

appear that the Examiner's reliance upon *In re Leshin* is misplaced with respect to the current inquiry.

Appellant further asserts that the Examiner's rejection is improper because, not only does Saka et al. fail to disclose an integrated circuit manufacturing system, Saka et al. further does not disclose or suggest any way in which the disclosed manufacturing process could possibly be adapted for manufacturing integrated circuit devices.

Claim 13 further recites the following:

**a first controller operatively connected to both said first display device and said first scanning device;
a second controller operatively connected to said at least a first manufacturing machine;
a data link connecting said first controller and said second controller;**

Claim 13, thus, requires a first controller and a second controller, the second controller being operatively connected to a manufacturing machine. As discussed below, Saka et al. does not disclose or suggest these limitations.

Generally, Saka et al. discloses a manufacturing process in which a product moves along an assembly line through sequential

stations. At each station, a part is added to the product or an operation (e.g., testing) is performed thereon. A tag of some sort (e.g., a barcode label) is attached to the product (or to a pallet carrying the product). A sensor (e.g., a barcode reader) is located at each station to read the barcode on the product as it enters the station. A display is also provided at each station for viewing by a human operator. The barcode reader and display at each station are connected to a central computer (line host controller 5, Fig. 1). In this manner, the central computer 5 can track the progress of each product through the assembly line and can also display instructions for a particular product on the station display for a human operator to follow.

Saka et al. may, arguably, disclose a controller (line host controller 5; Fig. 1) connected to a display and scanning devices located at multiple stations. Saka et al. does not, however, disclose a second controller operatively connected to a "manufacturing machine" as recited in appellant's claim 13 (Saka does not, in fact, disclose a manufacturing machine at all). Since Saka et al. does not disclose two controllers as recited in claim 13, Saka et al. clearly does not disclose or suggest a data link connecting two controllers as recited.

Accordingly, claim 13 is not obvious over Saka et al.

Claims 14, 15, 17 and 18 are allowable at least at depending from allowable base claim 13.

Claim 14 is allowable on further independent grounds in that neither Saka et al. nor any of the other references of record, considered either alone or in proper combination, disclose or suggest the manufacturing system of claim 13 and further wherein:

said system comprises a photolithographic integrated circuit manufacturing system.

As admitted by the Examiner, Saka et al. does not disclose a system for manufacturing integrated circuit devices.

Claim 15 is allowable on further independent grounds in that neither Saka et al. nor any of the other references of record, considered either alone or in proper combination, disclose or suggest the manufacturing system of claim 13 and further wherein:

said at least a first manufacturing machine comprises a wafer stepper machine.

As admitted by the Examiner, Saka et al. does not disclose a wafer stepper machine.

Claim 17 is allowable on further independent grounds in that neither Saka et al. nor any of the other references of record, considered either alone or in proper combination, disclose or suggest the manufacturing system of claim 13 and further comprising:

- at least a second manufacturing machine;
- a third controller operatively connected to said at least a second manufacturing machine; and
- a data link connecting said first controller and said third controller.

Saka et al. clearly does not disclose or suggest a second manufacturing machine, a third controller or a data link connecting first and third controllers as recited in claim 17.

Claim 18 is allowable on further independent grounds in that neither Saka et al. nor any of the other references of record, considered either alone or in proper combination, disclose or suggest the manufacturing system of claim 13 and further wherein:


- said second manufacturing machine is a resist spin track machine.

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As admitted by the Examiner, Saka et al. does not disclose a spin track machine.

Accordingly, all of the claims are believed to be allowable and all of the rejections should be reversed.

Respectfully submitted,
KLAAS, LAW, O'MEARA & MALKIN, P.C.

By  July 13, 2004

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(9) APPENDIX

13. A manufacturing system for manufacturing integrated circuit devices comprising:

at least a first manufacturing machine;

a human interface device including:

at least a first station associated therewith;

at least a first display device located adjacent said first station; and

at least a first scanning device located adjacent said first station;

a first controller operatively connected to both said first display device and said first scanning device;

a second controller operatively connected to said at least a first manufacturing machine;

a data link connecting said first controller and said second controller;

at least a second station associated with said human interface device;

at least a second display device located adjacent said at least a second station;

at least a second scanning device located adjacent said second station;

wherein said first controller is operatively attached to both said second display device and said second scanning device; and

wherein said first display device indicates to a human user when to move an object from said first station to said second station.

14. The manufacturing system of claim 13 wherein said system comprises a photolithographic integrated circuit manufacturing system.

15. The manufacturing system of claim 13 wherein said at least a first manufacturing machine comprises a wafer stepper machine.

17. The manufacturing system of claim 13 and further comprising:

at least a second manufacturing machine;

a third controller operatively connected to said at least a second manufacturing machine; and

a data link connecting said first controller and said third controller.

18. The manufacturing system of claim 17 wherein said second manufacturing machine is a resist spin track machine.